NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

LAKE TROPHIC DATA

MORPHOMETRIC:

LAKE	Clark Pond	LAKE AREA (HA)	55.04
TOWN	Canaan	MAXIMUM DEPTH (M)	13.4
COUNTY	Grafton	MEAN DEPTH (M)	5.1
RIVER BASIN	Connecticut	VOLUME (M^3)	2,815,000
LATITUDE	43° 44'N	MUD SURFACE AREA (HA)	55.08
LONGITUDE	72° 04'W	RELATIVE DEPTH	1.6
ELEVATION (FT)	1043	SHORE CONFIGURATION	1.41
SHORE LENGTH (M)	3700	AREAL WATER LOAD (M/YR)	6.81
WATERSHED AREA (HA)	777.0	FLUSHING RATE (YR^{-1})	1.3
% WATERSHED PONDED	0.4%	PHOSPHORUS RETENTION COEFF.	0.61

BIOLOGICAL: DATE	14 FEB 1986	30 JUL 1985
DOM. PHYTOPLANKTON (% total) 1	Asterionella (70%)	Chrysosphaerella (40%)
2	Synura (20%)	Asterionella (20%)
NUMBER OF ALGAL GENERA	7	11
SPECIES DIVERSITY		2.48
CHLOROPHYLL a (µg/L)		5.62
DOM. ZOOPLANKTON (% total) 1	Kellicottia (50%)	No sample
2	Keratella (35%)	
ROTIFERS/LITER	129	
MICROCRUSTACEA/LITER	8	
TOTAL ZOOPLANK. CNTS (cells/L)	142	
VASCULAR PLANT ABUNDANCE		Common
DOMINANT VASCULAR PLANTS 1		Eriocaulon
2		Utricularia
3		Nymphaea
SECCHI DISK TRANSPARENCY (M)		~ 4.5
BOTTOM DISS. OXYGEN (mg/L)	3.0	0.6
SEDIMENT: % ORGANIC MATTER		

LAKE TYPE: A natural pond.

SUMMER THERMAL STRATIFICATION: YES X NO ____ WEAK ____

IF YES, VOLUME OF HYPOLIMNION 294,000 (m^3) THERMOCLINE DEPTH 5.0 (m)

CHEMICAL: (mg/L unless indicated otherwise) LAKE: Clark Pond

	WINTER		SUMMER		
DATE	14 FEB 1986		30 JUL 1985		
DEPTH (M)	4.0	8.0	2.0	6.5	11.0
pH (UNITS)	6.5	6.4	7.0	6.4	6.2
ALKALINITY (I. P.)	6.0	6.7	5.6	5.2	6.4
ALKALINITY (F.E.P.)	7.8	8.1	7.3	6.9	8.0
NITRITE+NITRATE NITROGEN			< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN			0.50		0.36
TOTAL PHOSPHORUS	NR	NR	0.004	0.010	0.013
SPEC. CONDUCT. (µMhos/cm)	36.2	37.5	31.5	30.9	33.2
APPARENT COLOR (UNITS)	30	30	20	25	30
TRUE COLOR (440 nm)(UNITS)	NR	NR	18	16	25
MAGNESIUM			0.56		
CALCIUM			2.9		
SODIUM			1		
POTASSIUM			< 0.5		
CHLORIDE			< 2		< 2
TN : TP			125		28
INORG-N : INORG-P					
[Mg+Ca] : [Na+K]					
CALCITE SATURATION INDEX			3.1		

* = NOT DEFENSIBLE NR = NO RESULT

TROPHIC CLASSIFICATION: 1985

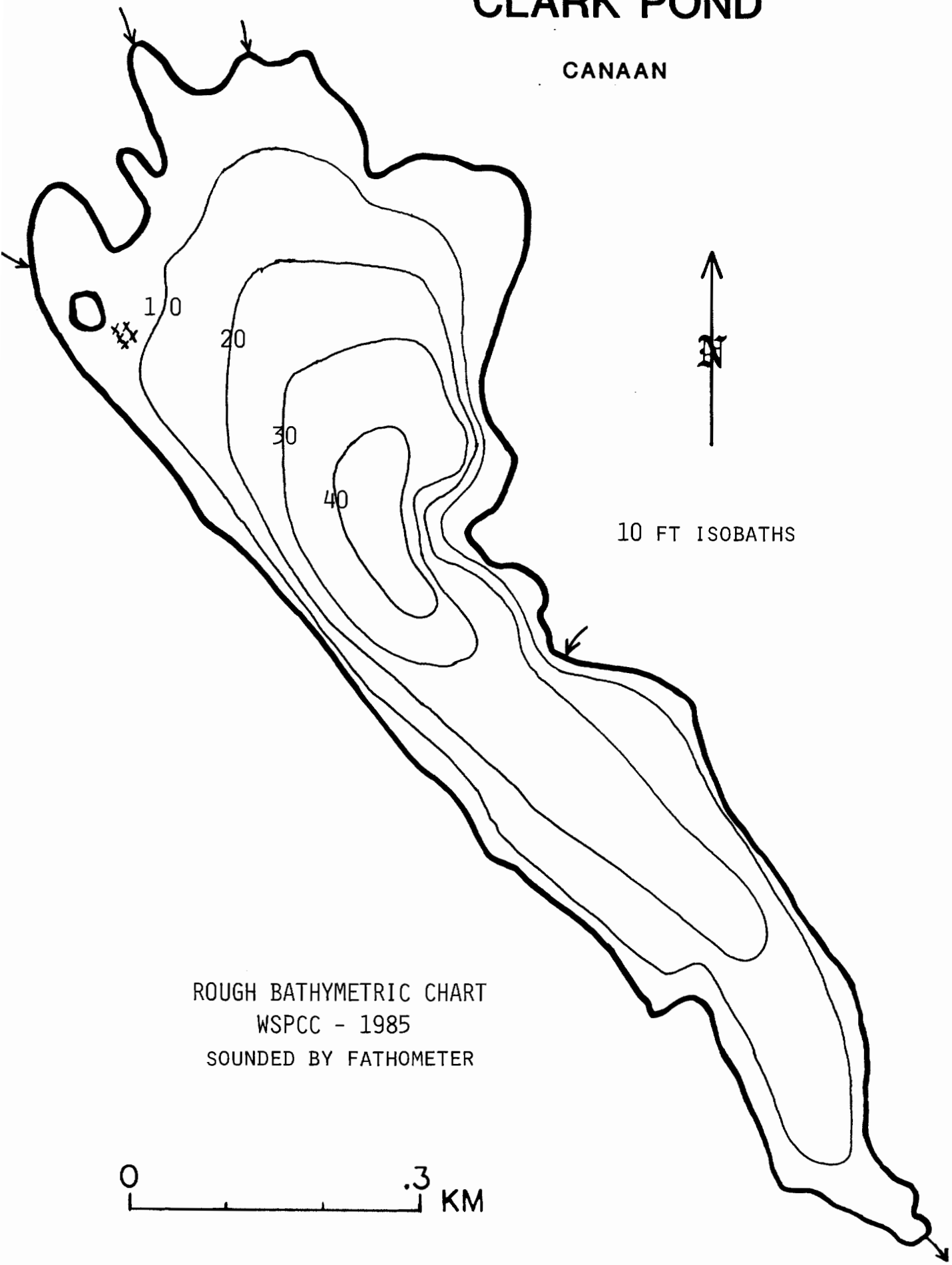
	D.O.	S.D.	PLANT ABUND.	CHL a	TOTAL PTS.	TROPHIC CLASS.
CLASSIFICATION POINTS:	4	1	2	1	8	Meso.

COMMENTS:

1. Good boat launch with ample parking, although water was shallow.
2. About 6 cottages located along the shoreline.
3. Road to pond was not plowed in the winter, access was by cross-country skis.

CLARK POND

CANAAN



FIELD DATA SHEET

WATER BODY Clark Pond TOWN Canaan BY WSPCC

DATE COLLECTED 30 July 1985 WEATHER Sunny, warm, & windy

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
DEEP SPOT	0.1	23.7	8.2	98%			
	1.0	23.6	8.1	97%			
	2.0	23.6	8.1	97%			
	3.0	23.4	8.1	97%			
	4.0	21.9	8.5	97%			
	5.0	17.6	9.7	102%			
	6.0	14.0	7.4	74%			
	7.0	11.8	6.4	69%			
	8.0	9.5	4.8	42%			
	9.0	8.2	3.2	28%			
	10.0	7.9	2.0	17%			
	11.0	7.6	1.5	13%			
	12.0	7.4	0.8	7%			
	13.0	7.4	0.6	5%			

SECCHI DISK (M) 4.5

BOTTOM DEPTH (M) 13.0

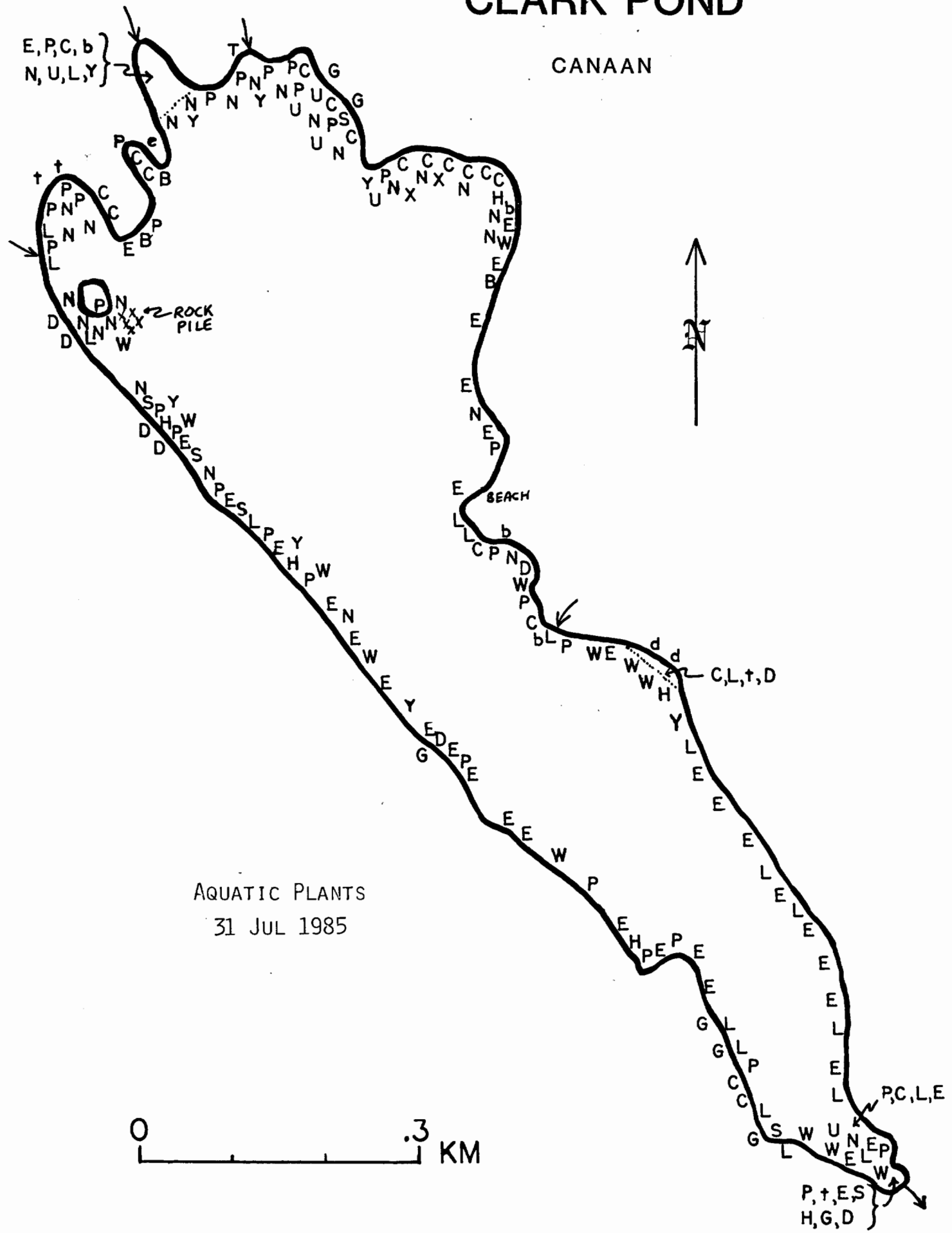
TIME 1330 hrs.

COMMENTS: 1. Secchi disk transparency is approximate ; Kemmerer bottle was visible at 4 meters (forgot Secchi disk) and water was very choppy from high winds.

* Dissolved oxygen values in mg/L

CLARK POND

CANAAN



AQUATIC PLANT SURVEY

LAKE Clark Pond TOWN Canaan DATE 31 JUL 85 BY WSPCC

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
P	Pontederia cordata	Pickerelweed	Scattered
C	Cyperaceae	Non-flowering sedge	Scattered
L	Lobelia dortmanna	Water lobelia	Scattered
t	Lysimachia terrestris	Swampcandle	Scattered
E	Eriocaulon septangulare	Pipewort	Common
S	Sparganium	Bur Reed	Scattered
H	Equisetum	Horsetail	Scattered
D	Dulichium arundinaceum	Three-way sedge	Scattered
W	Potamogeton	Pondweed	Scattered
Y	Nuphar	Yellow water lily	Scattered
d	Drosera	Sundew	Sparse
b	Scirpus	Bulrush	Scattered
N	Nymphaea	White water lily	Common
B	Brasenia schreberi	Water shield	Scattered
U	Utricularia	Bladderwort	Common
T	Typha	Cattail	Sparse
e	Eleocharis	Spike rush	Sparse
X		Sterile thread-like leaves	Scattered
G	Gramineae	Grass family	Scattered

OVERALL ABUNDANCE Common

GENERAL OBSERVATIONS:

1. Plants were abundant in the northern coves. The rest of the shoreline had scattered to common plants in the near shore area only - they did not extend out into the lake and were not a nuisance problem.

2. Two loons were observed.